webserver@yucca-web1.ymp.gov on 02/08/2000 03:05:09 PM

To: EISR/YM/RWDOE
cc:

EIS001251

Subject: EIS Comment

February 08, 2000 15:05:09

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The Commentors Name:
--->Dr. Eldon Haines

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The Commentors Address:
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--->Eugene, Oregon 97403

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---> organization : Retired JPL Planetary Science
---> position :

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Comment Text :
-->Ms. Wendy R. Dixon, EIS Program Manager

Dear Ms. Dixon:

1 We all take pride in the thought and technical care that the DOE managers, engineers, and contractors have demonstrated at the Yucca Mountain site. However, there are physical limitations within Yucca Mountain that make it unsuitable for long-term geologic storage of radioactive materials.

I'm sure you are aware of the strain-rates on Yucca Mountain measured by the team of Caltech and Harvard seismologists using DGPS (Wernicke et al., Science 279, 27-Mar-98, pp. 2096-2100.) These measurements corroborate other triangulation records and demonstrate a strain rate "about three to four times the average Basin and Range rate." The authors believe that this strain rate will result in volcanic activity across Yucca Mountain, the Lathrop Wells Cone already being the first. I see no accounting of this seismological evidence in the DEIS. I want to see this matter, the strain rate, and possible volcanic activity during the expected life of the waste site, fully explored and discussed openly.

Another matter of utmost concern is the presence of "bomb-pulse" Cl-36 and Tc-99 in rocks taken from three fracture zones (and perhaps three others) in the Exploratory Studies Facility, demonstrating fast flow in Yucca Mountain (Fabryka-Martin, et al. LA-13352-MS, UC-802, December 1997). The high strain rate (see above) will probably increase the number of fracture zones. Fast flow within the mountain requires that, once a canister corrodes, its contents will flow quickly into the environment. Surely the danger to living systems needs no further emphasis.

It is very important that the physical limitations of the Yucca Mountain site be recognized. If we are truly putting the huge quantities of radioactive wastes away for all time, and not merely responding to political expediency, then we must give
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grave attention to Yucca Mountain's flow patterns and instabilities. Please inform me of any action you take on these matters.

Respectfully yours,
Eldon Haines, Ph.D.
(Retired, nuclear and planetary scientist)
